

Henrico Health District
Mumps - Information for Health Care Providers
Updated 9-27-06

Organism	Mumps virus – Paramyxoviridae family
Reservoir	Humans
Transmission	Respiratory droplets; direct contact with nasal, throat secretions or saliva; rarely airborne
Incubation Period	Average 16 to 18 days (range of 12-25 days)
Infection Control	Droplet and standard precautions (Use surgical mask if within 3 feet of patient.) Place patient in exam room immediately upon arrival. If no exam room is available the patient should sit three or more feet away from others and be seen as soon as possible. A patient with mumps symptoms should put on a procedure/surgical mask immediately and wear for during duration of visit.
Symptoms & Signs	20% - asymptomatic; 40-50% - nonspecific or respiratory symptoms alone 30-40% - classic symptoms of a prodrome of low-grade fever, anorexia, malaise, and headache for 2-3 days followed by non-suppurative salivary gland inflammation and tenderness, usually the parotid gland, often accompanied by fever
Complications	Most common - viral meningitis (1-10% of patients with parotitis), epididymo-orchitis (20-30% of post-pubertal males), oophoritis (5% of post-pubertal females) Rare - pancreatitis, deafness, arthritis, encephalitis; death is rare Excess fetal deaths associated with gestational infections
Treatment	Analgesics-antipyretics; warm or cold packs for inflammation
Differential Diagnosis	Suppurative parotitis; drugs (phenylbutazone, thiouracil, iodides, phenothiazines); HIV in children; parainfluenza 3 virus; coxsackie virus; influenza A virus
Case Definition	Clinical Case Definition - An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting 2 or more days , and without other apparent cause. Probable Case - Meets clinical case definition, has non-contributory or no serologic or virologic testing, and is not epidemiologically linked to a confirmed or probable case Confirmed Case - Laboratory confirmed or meets clinical case definition and is epidemiologically linked to a confirmed or probable case. A laboratory-confirmed case does not need to meet the clinical case definition.
Laboratory Testing	<ul style="list-style-type: none"> • Viral Culture - Collect buccal swab if patient presents within 72 hours of onset of parotitis (Latest reports from Midwest Outbreak show about 10% sensitivity.) • Serology (Mumps IgM, IgG) – Collect first sample when patient presents; collect second sample at least 10 days after first sample (Neither sensitivities nor specificities from vaccinated nor unvaccinated persons have been clearly defined; interpretation of these results is difficult, especially in vaccinated persons.) • There is no way to rule out mumps using laboratory criteria. • Testing must be coordinated with Virginia Department of Health if samples are to be sent to state lab or CDC*.
Period of Communicability	<ul style="list-style-type: none"> • Virus has been isolated from saliva 7 days before to 9 days after before onset of parotitis. • Some studies suggest the infectious period to be 3 days prior to 4 days after onset of symptoms
Isolation	Isolate cases for 9 days after onset of symptoms.

Definition of Immunity (in outbreak setting)	Acceptable presumptive evidence of immunity: <ul style="list-style-type: none"> • Documentation of two doses of mumps containing vaccine for <ul style="list-style-type: none"> - School-aged children (i.e., grades K-12) - Adults at high risk (i.e., persons who work in health care facilities, international travelers, and students at post-high school educational institutions) • Documented physician-diagnosed case • Positive mumps IgG
MMR Vaccine	<ul style="list-style-type: none"> • Live attenuated vaccine; given together as triple antigen vaccine, MMR • Two doses separated by ≥ 4 weeks. Give dose 1 at ≥ 12 months of age • 90% - 95% effective
Vaccine Contraindications	<ul style="list-style-type: none"> • Severe reaction to a previous dose of vaccine; severe allergic reaction to gelatin or neomycin; pregnancy; severe immunosuppression; large daily doses of corticosteroids; moderate or severe acute illness; recent blood products • If PPD not applied same day as MMR, delay PPD for ≥ 4 weeks
Vaccine Adverse Reactions	Fever - 5-15%; Rash – 5%; Joint symptoms – 25%; Rare = thrombocytopenia, parotitis, deafness, encephalopathy

* Process for sample collection when specimens are being sent to state lab (DCLS):

- Buccal swab for mumps virus culture – Massage the parotid gland area (the space between the cheek and teeth just below the ear) for about 30 seconds prior to collection of the buccal secretions. Use a virus collection swab (polyester) to swab the buccal cavity, i.e., the space inside the mouth near the upper rear molars between the cheek and the teeth. Immediately place the buccal swab into a tube of viral transport medium and secure screw-capped lid to prevent leakage.
- Serum – Collect 7-10 ml of blood in a red top or serum separator tube (SST).
- Each specimen must be labeled with patient name, specimen type, and collection date.
- Specimens should be kept refrigerated during storage and transportation. (Include frozen cold-packs in shipping container to maintain refrigeration temperature.)
- Call local health department (501-4522) to coordinate submission of specimens to state lab and CDC.

**Report all suspected and probable cases of mumps to the
Henrico Health District:**

Phone 804-501-4522

Fax 804-501-4232

For urgent after hours public health consultation, call 1-866-531-3068